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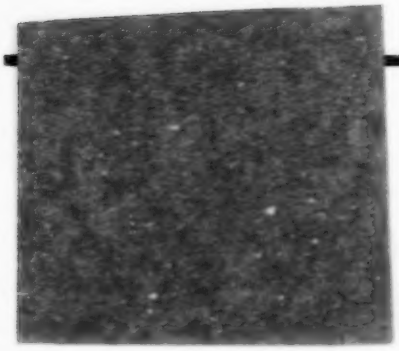

SUMMARY

of the

REPORT OF THE IN-DEPTH REVIEW OF THE NATIONAL COMMUNICATION

of

LUXEMBOURG

(The full text of the report (in English only) is contained in document FCCC/IDR.1/LUX)

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Under Articles 4 and 12 of the Convention, Parties are required to prepare national communications on their implementation of the Convention. Guidelines for the preparation of national communications and the process for their review were agreed on by the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change, by its decisions 9/2 and 10/1, and by the Conference of the Parties, at its first session, by its decisions 2/CP.1 and 3/CP.1 (see FCCC/CP/1995/7/Add.1). In accordance with these decisions, a compilation and synthesis of the first 33 national communications from Annex I Parties was prepared (FCCC/CP/1996/12 and Add.1 and 2).

When reviewing the implementation of the Convention by Parties, the subsidiary bodies and the Conference of the Parties will have this report available to them in English as well as the summary of the report in the six official languages of the United Nations. (These bodies will also have before them the executive summary of the first national communication of Luxembourg and country-specific information drawn from a compilation and synthesis report covering all countries that have submitted national communications.)

Summary[1]

1 The in-depth review of Luxembourg was carried out between September 1996 and May 1997 and included a visit to Luxembourg from 13 to 15 November 1996. The review team included experts from Algeria, Romania and Belgium.

2 Luxembourg has very specific national circumstances. It is a small, well developed country with a territory of 2,586 sq km and a population of 412,000 (1996). Its per capita gross domestic product is the highest in the European Community (EC) of which Luxembourg is an active member. All oil, coal and gas as well as about 97 per cent of electricity is imported, the rest of the electricity is produced by industries and hydropower stations. Almost all goods manufactured in Luxembourg are exported. Thus its economy is fully integrated into the economies of the EC member States and other countries, making the range of country-specific policies rather limited.

3 Luxembourg has a very high level of per capita energy-related carbon dioxide (CO_2) emissions, which in 1990 amounted to roughly 29 tonnes compared to an average of 12 tonnes in the countries of the Organisation for Economic Co-operation and Development (OECD) and 8 tonnes for OECD-Europe. The significant growth in the transport sector, the total dependence on external energy sources and the foreign ownership of a large number of production facilities situated on the territory of Luxembourg significantly limit mitigation efforts in the country. There is no coherent national climate change policy and climate change measures are regarded as part of the EC-wide environmental policies.

4 The Government of Luxembourg, while supporting the EC-wide objective of stabilizing CO_2 emissions by the end of the present decade at the 1990 level, has set a more stringent national target of reducing CO_2 emissions by at least 20 per cent by 2005 compared to the 1990 level. Other greenhouse gases (GHG) are not subject to a specific target. Luxembourg is a supporter of the introduction of a CO_2/energy tax at the EC level, especially if implemented in the transport and residential sectors. It does not envisage using increased taxation at the local level as an instrument for reducing GHG emissions.

5 The inventories prepared were based on the CORINAIR[2] methodology and covered the main GHGs and precursors. According to the 1990 GHG inventory, the shares of CO_2, methane (CH_4) and nitrous oxide (N_2O) in the national total were 94 per cent, 5 per cent and 1.6 per cent respectively. Fuel combustion contributed 94 per cent to the total CO_2 emission, 62.4 per cent of

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[1] In accordance with decision 2/CP.1 of the Conference of the Parties (see FCCC/CP/1995/7/Add.1), the full draft of this report was communicated to the Government of Luxembourg, which had no further comments.

[2] CORINAIR is the component dealing with air emissions inventories of the European Economic Community CORINE (Coordinated Information System on the State of Natural Resources and the Environment).

fuel combustion emissions were due to industry, 17.7 per cent to energy transformation, 8.5 per cent to transport and 7.6 per cent to the residential sector. The main sources of the methane emissions were agriculture (74.3 per cent) and waste (16.2 per cent). Agriculture was responsible for 79.3 per cent of total N_2O emissions and energy and transformation for 17.0 per cent. The transport sector - the fastest growing emission source - contributed about 50 per cent of total emissions of non-methane volatile organic compounds (NMVOC) and accounted for roughly 40 per cent of nitrogen oxide (NO_x) and over a quarter of carbon monoxide (CO) emissions. All the forest is managed and covers about 34 per cent of the country's territory. Sequestration of CO_2 by forest was calculated to be 295 Gg per year and is expected to remain stable or increase slightly in the next ten years.

6. The majority of measures reported in the national communication were of a "no regrets" nature and basically addressed energy-related issues in the sectors where GHG emissions appear to be on the increase. The industrial sector, which is dominated by the steel industry, was responsible for over 60 per cent of CO_2 emissions in 1990. Major emission reductions in this sector will be achieved soon with the replacement of the older blast furnaces by more energy-efficient electric arc furnaces by the end of 1997. In the industrial sector the main instrument to reduce emissions is a system of voluntary agreements aimed at encouraging enterprises to improve their energy efficiency. The first such agreement was signed with the Federation of Luxembourg Industries (FEDIL), which committed itself to improving energy efficiency in industry by 10 per cent by the year 2000 compared to 1990.

7. In the residential/institutional sector the focus is on promoting cogeneration in public buildings. A special agency has been created to promote cogeneration and the Government has established preferential tariffs for electricity produced by these installations. One of the developments that is expected to result in appreciable reductions in CO_2 and NO_x emissions is the wider penetration of natural gas as an energy source for households. It is expected that by the year 2000 about half of the country's communities, accounting for about 85 per cent of the population, will be connected to the natural gas grid. At present, 70 per cent of the population are connected.

8. The fact that the transport sector is the fastest growing source of CO_2 emissions, the figure for 1996 being 35 per cent higher than that for 1990, is partly explained by the growth in the number of new cars purchased (with no signs of saturation yet) and partly by the increased transit traffic of heavy trucks. The team noted that, according to the Intergovernmental Panel on Climate Change (IPCC) guidelines, the fuel sold in the territory of a country is counted in the emissions of that country. Since fuel prices in Luxembourg are lower than in neighbouring countries, "fuel tourism" accounts for a substantial share of petroleum products sales and makes a sizeable contribution to budget revenues (about 10 per cent). According to the estimates of the Environment Agency of Luxembourg, in 1996 up to 60 per cent of gasoline and up to 67 per cent of diesel fuel were exported (these numbers in 1990 were 61 and 75 per cent, respectively). "Fuel tourism" also contributes substantially to the emissions attributed to the transport sector. A number of measures are being implemented or are planned to curb the growth of emissions from

the transport sector, mainly by promoting public transport. One project is "Bus Tram Bunn 2002", which envisages further development of the public transport network and construction of sections of the light rail transport system. Another project - involving a hybrid electric bus - is under way, with two buses already operating in Luxembourg city.

9. The national communication contains projected estimates of GHG emissions for the year 2000. They indicate that CO_2 emissions are projected to decrease by 33 per cent, CO by 40 per cent, NO_x by 8 per cent and NMVOC by 27 per cent. Emissions of CH_4 and N_2O are projected to increase by 5 and 3 per cent, respectively. No econometric models were used however and no "without measures" scenario was prepared. The team strongly recommended that attention be given to the projections in the next communication.

10. Financial assistance to developing countries and countries with economies in transition amounted to 0.42 per cent of the gross national product in 1995 and GNP and 0.44 per cent in 1996. The Government has set itself the objective of increasing this proportion to 0.70 per cent by the year 2000.

11. During the review a considerable amount of information was provided to the team on public awareness and the dissemination of information regarding climate change, in particular through leaflets and information campaigns. The Government will be enhancing the existing programmes with a view to raising awareness of consumption patterns and industrial practices associated with climate change.

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